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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/586,564	06/02/2000	Alberto Profumo	3286-0103P	7632

7590 03/24/2004

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EXAMINER

FERRIS, DERRICK W

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 03/24/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/586,564

Applicant(s)

PROFUMO ET AL.

Examiner

Derrick W. Ferris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-36 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 18-36 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 02 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/27/04 has been entered.

Response to Amendment

2. **Claims 18-36** as amended are still in consideration for this application. Applicant has amended claims 18, 30, 35, and 36 (and not just claims 18 and 35 as mentioned in applicant's remarks filed 2/27/04 at page 12, second paragraph).

3. Examiner **withdraws** the obviousness rejection to *Hou et al.* ("Hou") for Office action filed 01/15/04 based on applicant's amendments.

4. Examiner **withdraws** the obviousness rejection to *Ghaibeh et al.* ("Ghaibeh"); and *Ghaibeh et al.* ("Ghaibeh") in view of *Narasimhan et al.* ("Narasimhan") for Office action filed 01/15/04.

With respect to the *Ghaibeh* reference, examiner notes the following limitation is at issue:

"preallocating a certain portion of total bandwidth in a static modality to at least a portion of the plurality of Peripheral Stations, said preallocation representing an assignment of fixed capacity to said at least a portion, on the basis of information about active connections without considering status of queues in the plurality of Peripheral Stations".

In particular, applicant claims that *Ghaibeh* does not teach static modality. The examiner respectfully disagrees. Static modality is supported through CBR as taught e.g., at column 5, lines 55-67 and column 09, line 57 – column 10, line 11 since CBR is static as is known in the art. In particular, applicant also supports such an assertion on page 06, lines 10-11 of applicant's specification disclosing:

"To satisfy QoS (Quality of Service) requirements of CBR traffic static assignment is used; for other types of traffic dynamic assignment is preferred."

In addition, see also page 08, lines 07-20 and 30-33 of applicant's specification. As such, examiner notes that preallocation or static bandwidth through CBR is inherently taught in the *Ghaibeh* reference. To further support the examiner's argument, the examiner has added an additional reference making a new rejection shown below.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 18-27, 30-31, and 35-36** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,978,374 to *Ghaibeh et al.* ("*Ghaibeh*") in view of "Asymmetric ATM-PON interface compliant to ITU-T/FSAN Standard for global optical access system" to *Tajima et al.* ("*Tajima*").

As to **claim 18**, *Ghaibeh* discloses a point-to-multipoint network where figure 1 shows at least one head-end 22 (i.e., master station) and a plurality of network units (i.e.,

peripheral stations). In particular, *Ghaibeh* discloses a system and method for assigning/allocating bandwidth on the transmission channel from the network units 26 to the head-end 22 where bandwidth is assigned using “permits” (i.e., grants) in the downstream using a one byte MAC header (i.e., MAC protocol) and requested using “requests” in the upstream [see figure 6]. In addition, *Ghaibeh* teaches a reasonable but broad interpretation of both static and dynamic allocation techniques including CBR, VBR, and ABR (for a minimum guaranteed bandwidth). Thus both a “guaranteed dynamic bandwidth” and “available bandwidth technique” are taught by the reference [e.g., column 2, lines 50-67; column 5, lines 55-67].

What may not be clear from *Ghaibeh* is the further limitation “preallocating a certain portion of total bandwidth in a static modality to at least a portion of the plurality of Peripheral Stations, said preallocation representing an assignment of fixed capacity to said at least a portion, on the basis of information about active connections without considering status of queues in the plurality of Peripheral Stations”. Examiner notes that the limitation is implicitly taught since the reference supports CBR. In particular, see e.g., column 5, lines 55-67 and column 09, line 57 – column 10, line 11 of *Ghaibeh*. However, assuming, arguendo, that CBR is not preallocated, then examiner notes the following obviousness rejection below as well.

Tajima also teaches an ATM point-to-multipoint system using a MAC based protocol (e.g., see Abstract). *Tajima* further teaches the above-cited limitation at the bottom left-hand column on page 28.

Examiner's proposed modification to the *Ghaibeh* reference would be to further illustrate that CBR traffic is pre-assigned (i.e., preallocated). Thus examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to perform the further limitation of preallocating a certain portion of total bandwidth in a static modality to at least a portion of the plurality of Peripheral Stations, said preallocation representing an assignment of fixed capacity to said at least a portion, on the basis of information about active connections without considering status of queues in the plurality of Peripheral Stations. In particular, one skilled in the art would have been motivated to perform said limitation to decrease the cell delay of legacy traffic. *Tajima* further teaches the above-mentioned motivation at the bottom left-hand column on page 28. Finally, examiner also notes a reasonable expectation level of success since the dynamic bandwidth algorithm as taught by both *Tajima* and *Ghaibeh* would be able to further handle the remaining bandwidth allocation on an add needed basis.

As to **claims 19-21**, see column 9 lines 57-67 through column 10, lines 1-46.

As to **claim 22**, see column 10, lines 21-35.

As to **claim 23-27**, see column 6, lines 60-67 through column 7, lines 1-13 and column 9 lines 57-67 through column 11, lines 1-55.

As to **claim 30**, see the rejection for claim 1.

As to **claim 31**, see the rejection for claim 2.

As to **claims 35-36**, see similar rejection for claim 1.

7. **Claims 28-29 and 32-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,978,374 to *Ghaibeh et al.* ("*Ghaibeh*") in view of "Asymmetric ATM-PON

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interface compliant to ITU-T/FSAN Standard for global optical access system” to *Tajima et al.* (“*Tajima*”) and in further view of “Data Link Control Protocols for Wireless ATM Access Channels” to *Narasimhan et al.* (“*Narasimhan*”).

As to **claims 28-29**, *Ghaibeh* is silent or deficient to retransmission of cells that contain errors (i.e., a data link layer). Examiner notes that retransmission of cells through acknowledgment messages are well known in the art prior to applicant’s invention. As support, *Narasimhan* discloses transmitting an acknowledgment and corresponding packets thus providing a motivation for a retransmission mechanism [page 755].

As both reference discloses telecommunications in general, and more particularly, ATM packets based on a dynamic TDMA framework, examiner notes a motivation to combine the subject matter as a whole for both references. In other words, one would be motivated to modify the teachings of *Ghaibeh* to provide similar error correction since both inventions add a MAC layer to ATM.

As to **claim 32-34**, see column 6, lines 60-67 through column 7, lines 1-13 and column 9 lines 57-67 through column 11, lines 1-55 of *Ghaibeh*.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (703) 305-4225. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

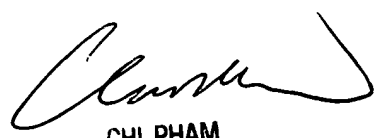
If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663


DWF


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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 3/18/04